

# Phase II of a Biogeographic Assessment off North/Central California for the Office of National Marine Sanctuaries: Completion of the Marine Mammal and Bird Assessments

## Project Overview

Phase I of this biogeographic assessment (2001-2004) was conducted to support the management plan review and development for three national marine sanctuaries off north/central California – Cordell Bank, Gulf of the Farallones and Monterey Bay. Sanctuary staff are required to update their management plans every ten years and staff need new information to update these plans. This work supports NOAA's environmental stewardship goal to sustain healthy coastal ecosystems by assessing the distribution and relative abundance of the coastal biota and associated habitat.

The goal of the assessment was to identify and gather the best available data and information to characterize and identify important biological areas and time periods within the study area. The study area encompasses the three sanctuaries and extends along the coastal ocean off California from about 35°-39°N (Pt. Sal to Pt. Arena). This partnership project was lead by the Biogeography Team of NOAA's Center for Coastal Monitoring and Assessment and the Office of National Marine Sanctuaries, but included over 90 contributors and 25 collaborating institutions.

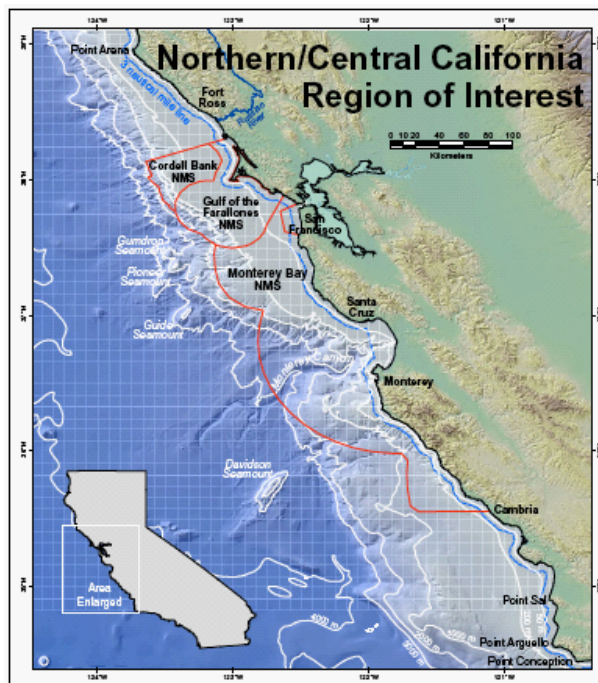
Phase I was completed in 2004 and the results include: a report folio of the overall assessment, an ecological linkage report on the marine and estuarine ecosystems along the coast of north/central California, and hundreds of maps, tables and analyses, which are available for viewing and download, in several formats at the following website:

[http://biogeo.nos.noaa.gov/products/canms\\_cd/](http://biogeo.nos.noaa.gov/products/canms_cd/)

Phase I results for birds and mammals can be viewed or downloaded at these sites:

[http://biogeo.nos.noaa.gov/products/canms\\_cd/html/birds.htm](http://biogeo.nos.noaa.gov/products/canms_cd/html/birds.htm)

[http://biogeo.nos.noaa.gov/products/canms\\_cd/html/mammals.htm](http://biogeo.nos.noaa.gov/products/canms_cd/html/mammals.htm)



## Goals, Objectives and Products

Draft mammal and bird analyses were included in the Phase I Products. Therefore the goal of Phase II is to update and complete the mammal and bird sections of the marine biogeographic assessment off north/central California and to produce two reports, one for mammals and one for birds. Phase II was implemented with the following objectives:

- Update the colony data and maps for pinnipeds, sea otters and selected birds.
- Make revisions to selected at-sea mammal maps and complete the overall mammal analyses and summary.
- Conduct a GIS analysis of the associations of physiography and selected marine birds and mammals.
- Develop two reports, one for birds and one for mammals, on the completed biogeographic assessment for these species groups.
- Develop a website for downloading the final reports, maps and related data.

## Project Partners

This work would not be possible without the expertise and support of Glenn Ford and Janet Casey of R.G. Ford Consulting Co., David Ainley of H.T. Harvey and Associates, and Carol Keiper of Oikonos. Additional guidance has been provided by Jan Roletto, Dan Howard, Andrew DeVogelaere and staff from the national marine sanctuaries regional offices for the subject sanctuaries.

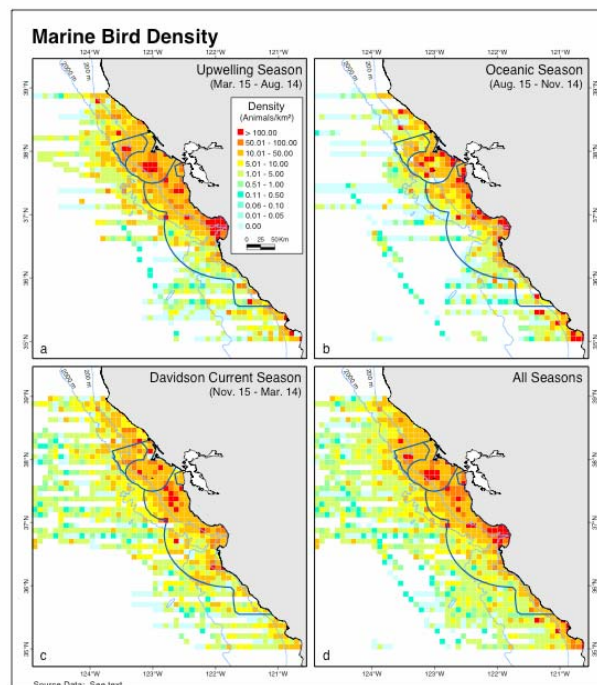
## Project Period

The project began in November 2003 and extends through December 2005.

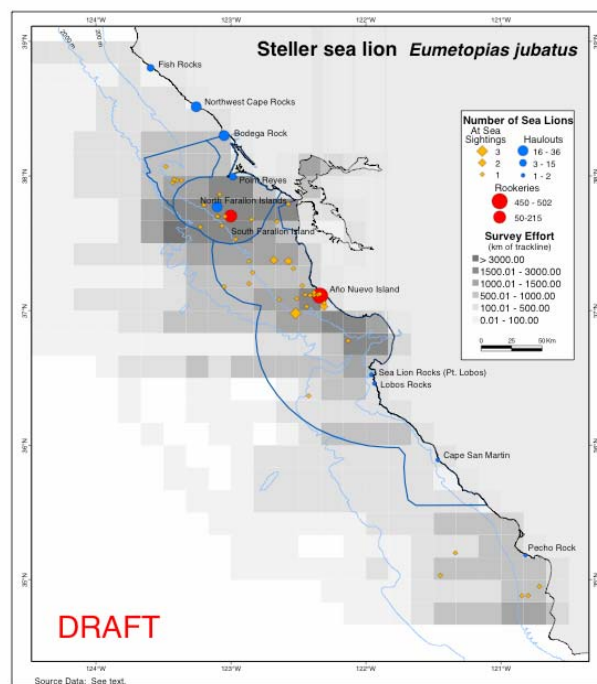
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Phase I product: marine bird density at sea by ocean season, from 1980-2001; CDAS data set.



Phase 1: Steller sea lion sightings, survey effort at sea, rookeries and haulouts. SWFSC & CDAS.